

NOTES ON PAPUAN BIRDS.

BY THE HON. WALTER ROTHSCHILD, PH.D., AND ERNST HARTERT.

(Plates II., III.)

INTRODUCTION.

WE have, at the Tring Museum, within the last years, received a number of more or less important collections from different places in New Guinea and from the adjacent islands, and we intend to work them out in families, beginning with the *Pittidae* and Parrots. In some cases we shall review the whole genus, when of special interest, and when enough material is to hand. Where we seem to know enough of a genus we shall try to work out the actual affinities and relations of the various forms to each other. In doing so we shall often be obliged to reduce to subspecific rank many forms hitherto named binomially as "good species." When certain allied forms replace each other geographically, and when the characters of any of them are indicated in any of the others, they must, in our opinion, be treated as subspecies, even if all connecting links are not seen in our scanty material. The largest material is generally very scanty in comparison to the wide area inhabited by the birds and to the number of individuals in existence, and we cannot, therefore, expect too much of what represents a species or subspecies in our drawers. Also when the differences are no other than a larger bill, or slightly larger size, such forms must be called by three names, even if the differences are not bridged over. We often find in ornithological works notes saying that specimens from, say the Arn Islands, are smaller (wing 3 or 4 mm. shorter) than those from, say New Guinea, but that they do not constitute a separate species. On the other hand, nobody hesitated to separate specifically a bird which is twice the size of another. But this is theorising most arbitrarily. Our principal object is, or at least should be, to recognise the differences seen in individuals from various localities, not to attach names to the specimens before us! If, however, we find that the specimens from a certain country differ from those of another country, we must give them a name, in order to be able to speak about them and to call attention to their existence. It does not in the least matter whether we are able to classify one or two single individuals, as long as we discover the fact that there are two fairly constant forms of a certain species. It is of much greater advantage to show the affinity of the birds of a genus by uniting into species the closely allied representative forms—for example, to have only 9 species with 19 subspecies of the genus *Cyclopsitta*, than to have 19 species. The mere list of names shows that there are 19 groups of allied forms, while those in one group are more or less alike; but the list of 19 binomially named "species" gives no idea of their affinities at all. We believe, therefore, that our nomenclature will advance our knowledge, though it will not be accepted or applauded by many of our ornithological friends.

The maps of distribution will not only show our present knowledge, but, what is more important, what a vast area of New Guinea is still unexplored.

The most important collections we have received are the following ones :—

Mysol. Besides some few specimens collected on Mysol (or Misol) by Messrs. Guillemard and Powell, and some from Bruiju's hunters, we have a fairly good collection made on Mysol by Mr. Heinrich Kühn. Although at almost equal distance from Ceram and New Guinea, Mysol belongs faunistically entirely to New Guinea, and this is easily explained by the number of smaller islets stretching in a northern and north-eastern direction from Mysol towards Salwatty and New Guinea, and the shallow sea surrounding Mysol and New Guinea, while deep sea of more than two hundred fathoms separates Mysol from the Moluccan Islands. Most of the birds are quite similar to those of New Guinea, others subspecifically allied to the latter. Moluccan influence is scarcely perceptible.

Mysol with Salwatty, Waigiu, Batanta and some other small islands in their vicinity, are appropriately termed "**Western Papuan Islands,**" New Guinea itself being **Papua**, the D'Entrecasteaux Group, Trobriand, Woodlark, Louisiades—and the Bismarek Archipelago being the "**Eastern Papuan Islands.**"

Etna Bay and Triton Bay. These two gulfs in the south of North-western New Guinea are of special interest, as being among the former hunting grounds of Salomon Müller, one of the best collectors and travellers who ever explored the Eastern Archipelago. Captain Cayley Webster made some small collections at both places. He visited Etna Bay with the object of making a trip to the Charles Lonis mountains, but in this he failed altogether, as might have been expected. His men were attacked and several killed, as described in his book, which appeared under the somewhat fantastic and unfortunate title, "Through New Guinea and the Cannibal Countries." In the appendix to this book, pp. 366-9, Mr. Hartert has given a list of species received from Triton and Etna Bay. This collection, however, is very small, and can only be looked upon as samples of the ornithology of these districts.

At **Kapaur**, about 2°1' southern latitude, south of McCluer's Inlet, William Doherty made large collections in 1896, mostly in the surrounding hills. Collecting here is described as very difficult in Doherty's letters. The hills are thickly wooded, and awful to walk on. The natives are very hostile. Almost every man has a gun, principally used in slave-hunting, but also in shooting every edible bird, except the "sacred" ones, which are very numerous. The following extracts of some of Doherty's letters from and about Kapaur may be of interest.

"The hills above Kapaur do not look from the sea so high as they are, on account of the enormous height of the trees on the shore. Our collections are made from the sea-level up to 2000 feet, and partly to at least 3000 feet; but different elevations being often gone over on the same day, and my men often having gone out alone, the specimens are not labelled with the exact elevations they are caught at. We extended our excursions some 16 or 18 miles to the north-east, on the hills beyond the sources of the Sekertemping River. Of the Parrots we got only common species, besides *Lorius erythrothorax* and *Nasiterna bruijni*, which were numerous. The latter were obtained above 2000 feet. The parrots are extremely shy here, flying like sky-rockets and alighting only on the tops of the tallest trees. Pigeons are amazingly rare; even *Macropygia* and *Chalcophaps* are scarce here. Kingfishers were rarely seen. I have been told of the existence here of a *Seleucidus* with black side-plumes instead of yellow ones. We did not come across it, and if we had done so we could hardly have shot it, as it is "fomali," which means taboo! In small birds we did better. In the hills we got *Lamprolaima meyeri*, *Myzomela cruentata*, and many others. The natives were very suspicious and unkind at first,

but now they are quite well-disposed, though they worry us a great deal with their taboos! The male of *Paradisæa minor*, *Microglossus aterrimus* and *Corvus orru* are 'fomali' or 'pohen,' as the natives say at Kapaur. The most sacred bird, however, is the 'lusi,' which was described to me as being white, very large, and feeding on fish. I thought they meant a sea-bird; but by great ill luck Ram Persad, having done very badly one day, shot a huge *Haliaeetus leucogaster*, though he knew I did not want it, and it turned out that it was the 'lusi'! At first they wanted to kill him, but eventually we came to terms. I lost two days, for myself and my men, going over to Skru (Sekrou) in order to get the particular things I had to pay for blood-money: a gun, certain cloths and knives, altogether to the amount of over £3,* and for some time after the natives were very disagreeable."

"We can only make short excursions. Coolies for luggage are not to be had, and we would undoubtedly be killed if we took any goods with us. The natives are wholly without fear of Europeans; in fact, the only reason that the coast-people do not loot Skru is because they are afraid of the much stronger mountain tribes, who would kill them all in revenge for losing the market for their nutmegs. Here at Kapaur I see hundreds of the mountaineers—the biggest and strongest race of men I have ever seen, I think. They are neither cannibals nor head-hunters, but fight nearly always for the fun of it! Last winter they made an expedition to the large island of Adi, a hundred miles south, and killed off the whole population, not a soul being now left there. We are very badly off for food. The mainstays of life in these countries are rice, cocoa-nuts, and fowls—all unobtainable at Kapaur. I brought with me rice and rotten potatoes. A hundred pounds of beans from Europe turned out too old. Four days' cooking did not soften them. As for tins, there did not seem to be a single eatable thing at Amboina. How I did want some oatmeal, now that I *have* got sugarless tinned milk; how I longed for the dear tinned tomatoes and green corn of America! I have tinned corn beef and similar dreadful things, but no soups. I live principally on tea and biscuits with the hope of getting a pigeon now and then. My cook is certainly the worst in the world! Quite a change from the Dutch steamers, where the food is extraordinarily good—the best, I think, of ship food in the world; but, as you know, Dutch East Indian cookery is immensely complicated and expensive, and utterly unsuited for the jungle."

Collections from Kapaur have apparently never before reached Europe, but close by, at Skru (Sekru) Mr. Karl Schädler made a collection about the same time as Doherty's was made at Kapaur, and Dr. Finsch has given a list of the seventy-six species collected by him. (Notes, Leyden Museum, vol. xxii. pp. 49-69, July, 1900.) The author refers all the birds to known species.

Andai and Dorey. Besides numerous specimens from Bruiju's hunters and from the cruise of the *Marchesa*, we have some skins collected by Doherty at Dorey. Doherty could not enter the interior and high mountains of Arfak. Small-pox, cholera, and beri-beri were depopulating the country, and it was impossible to get one coolie or other man to accompany one. Ordinarily it is not considered by Doherty particularly difficult to go to the Arfak, except that it is a most inconvenient place on account of constant rain, fearful steepness of the slopes, and "scarcity of butterflies."

Ron Island. From this little island in the southern part of Geelvink Bay we have a small collection from Doherty. He found bird-life unusually poor on Ron.

* Mark the value of the "gun."

Except a few old women, the people of Ron were, at the time of Doherty's visit, all dead of cholera or run away.

“Ron is the largest island in the south of Geelvink Bay, though its area is not over sixty or seventy square miles. It is practically a part of Wandammen, the long narrow strait being less than a mile wide, though fairly deep. Ron is exceedingly steep and rugged, the coast generally rising almost precipitously, but the hills seem nowhere to reach 2000 feet. The island seems composed of ancient stratified rocks. There are many streams and waterfalls. The forest is not so fine as in many other places, the soil being rather thin. The population is generally considerable. It is mixed of the Wandammen-Wandesi tribe and Maforese immigrants, and slaves from the east coast of the bay.” (Written 1896.)

Schouten Islands.* This is the name for the two islands **Korrido** and **Biak**, which on older maps are generally shown as one continuous island under the name of Misory or Misori. Biak and Korrido together have an area of over 1200 square miles. The two islands are separated by a shallow winding strait. Biak itself is sometimes called Bosnek. Korrido is exceedingly mountainous, the hills reaching 4000 feet.

Doherty sent collections from both islands.

Mafor or **Mefor**. This island in the Geelvink Bay is also variously called Mambarri, Romaná, Numfur, Nufor, Mefór and M'fór. Doherty writes:—“The area, according to the chart, is rather over 100 square miles, but it is said to be much larger. It is entirely coralline, so far as I am aware, the height never exceeding 300 feet. The coasts are precipitous and generally greatly overhanging, which gives them a very curious aspect. The coral is the sharpest and most difficult to walk on I have ever seen, far worse than that of Sumba (cf. *Nov. Zool.* III. p. 577). The population is considerable, the coasts being generally held by the fierce Biakers, who cultivate next to nothing, but live by the sea; the true Maforese, the original colonisers of Dorey Bay, who have been obliged to retire into the interior, to live on vegetables. Their long houses in the sea, like boats upside down, as Wallace says, were all burnt, but they have built very similar ones at the top of the cliffs in three places on the south-west coast, at one of which, Snér, I made my headquarters. The Maforese are among the most brutal and repulsive savages that I have ever seen, but they have not the reputation for treachery and pure love of murder which the Biakers and Ansisis possess in so high a degree. Dutch influence there is none. Thanks to the guns given to the natives to shoot birds with, you hear of nothing but massacre after massacre, and island after island left uninhabited.” (Written 1896.)

Doherty sent a good number of skins from Mafor.

Jobi or **Jappen** Island. We have, besides, some skins from Dr. Guillemard of the *Marchesa*, some bought from milliners, evidently representing Jobi forms, and some from Brujia's hunters, a good collection from Jobi made by William Doherty.

Jobi is a large island of about 1000 square miles. Quite a surprising number of separate forms have rightly been described from Jobi (Salvadori, A. B. Meyer, etc.), though some of them have recently been discovered also along the north coast of New Guinea to western Kaiser Wilhelm's Land. The following extracts from

* There is also a group of small islets along the coast of Kaiser Wilhelm's Land, opposite the Kaiserin Augusta River, which on some maps are called Schouten Islands, and must not be confounded with those in the Geelvink Bay.

one of Doherty's letters explain these peculiarities to some extent. "In regard to the Geelvink Bay, I may remark that in the east the name is applied only to the area south of Jobi and Miosnom. Mafor and Biak are spoken of as being in the Pacific. The Geelvink Bay is of immense depth, being probably but little under 1000 fathoms' depth as far south as Wandammen and Yaur. It is true that soundings have not been taken, but the thing is obvious from the difficulty of finding anchorage, the bottom generally descending almost sheer from the shore, just as in the Banda Sea, the deepest enclosed water in the world. The sounding 4800 fathoms is not given in the latest charts, but 4200 is exceeding any part of the Atlantic, except a small tract near the Bahamas. This is important, as Wallace made the error of putting everything south of Mafor and Biak within the 100-fathom line. The small Meosauri Islands between Ron and Jobi (I do not mean Meoswar north-east of Ron!) also rise from deep sea, and on the north and south coasts of Jobi the sea is also deep. To the east of Jobi, the great river Mambiramn, called "**Ambérnoh**" on the maps, has in modern times filled up the sea so as to place the small island of **Kurudu** and the eastern end of Jobi in shallow water and entirely to surround with a marshy delta at least one ancient island which I saw east of Kurudu. I do not think it has any name, and this district is wholly unexplored. Owing to the great differences between the Jobi and the Waropen fauna, it is obvious that there was once deep sea over all the delta of the Mambiramn or Ambérnoh. The whole of the **Waropen** coast is fairly shallow for some distance from the shore, no doubt owing to the outflow of the rivers. The sea between Mafor and Biak seems also deep, so that the remarkable resemblance of their fauna is a curious fact.*

"The people of Jobi are unusually handsome and, for Papuans, almost polite; but Ansus in particular is known for its continual massacres of foreigners. The people have a hearty contempt for the Dutch. There is, as you are aware, no government whatever in Dutch New Guinea—not a single Dutch official, white or brown. Sorong, however, belongs to the Mohammedan Rajah of Salwatty, and the Dorey Bay has been rendered safe by the missionaries, though the natural brutality of the people has not been altered, and, I believe, no converts have been made except among the slaves bought when children by the missionaries. All the time I was on Jobi the natives were fighting gaily near Dorey."

On Jobi Mr. Doherty had the great misfortune to lose Pambu, a Lepcha, whom he calls his right-hand man, who was with him since 1889, and of whom he speaks in the highest terms. Poor Pamba was murdered by the savages of Jobi, either by the Ansus people or the hill-tribes. The day after this murder two other of Doherty's men, Ram Persad and Haidar Ali, were shot at, but escaped. Mr. Doherty himself, however, was not attacked, though collecting alone and unarmed in the jungle. All the Ansus men volunteered to undergo the boiling-water ordeal to prove their innocence. When Doherty went to the hill-villages with a Ternate trader and his armed slaves, accompanied by hundreds of armed Ansusers, he found the places deserted, and the Ansusers offered successively one, two and three slaves to keep the murder quiet.

The climate of Jobi is very deadly, and it rained all the time of Doherty's stay at Ansus.

The southern shores of Geelvink Bay are interesting to ornithologists, but we

* It will be seen in the course of our articles that, at least among the birds, there are not a few differences between the forms from Mafor and Biak (Schouten Islands). (W. R. and E. H.)

have no good material from there, though Bruijn's hunters collected at **Wandammen** skins were often received by the Dutch New Guinea Company from **Yaur**; A. B. Meyer collected at **Rubi**, and we received some skins bought by Doherty farther north on the **Waropen** coast. Doherty writes :

“Northern Wandammen is very thinly populated, and is quite without paths, the mountains rising directly from the sea, and attaining, towards the south-east, nearly the height of the Arfaks. They are uninhabited. In the south-west of Wandammen, and again in the district called Waropen at the head of the Wandammen Inlet (not to be confounded with the great Waropen east of Geelvink Bay !), there are extensive marshy, forest-covered plains along the sea, very well suited to sago cultivation, and consequently well inhabited, but I have no doubt very poor places for a naturalist—like Takar, in fact. The Wandammen birds are all, I am told, the same as the Arfak species, but east of Yaur another fauna is said to begin.”

From the **Ambernoh River** we have a few skins collected by Dumas, the late Mr. Everett's former companion. They were sent to us by Mr. van Renesse van Dnibenbode. Dumas also sent a number of skins from near **Humboldt Bay** on the north coast.

Mr. William Doherty again had the opportunity to collect at **Takar**. He made large collections there in 1897, but a whole box full of bird-skins was lost in the surf, another got so wet that the contents suffered considerably. Doherty calls the Takar trip a very trying one. They had three weeks' sea-voyage, his men sea-sick all the time, three weeks' hard work at Takar, and three weeks' voyage again, the men again sea-sick as usual. At Takar it rained nearly all the time.

Doherty made the trip to Takar in the *Zee Meeuw* (Captain Meyer), in company of the Resident of Ternate, Mr. Horst. The *Zee Meeuw*, writes Doherty, “is a little man-of-war. She rolls worse than any vessel I ever saw. My men had a perfect horror of her. Otherwise the trip was most pleasant, the Resident giving me all possible help, and allowing the ship to be turned into a naturalist's laboratory. We visited the little islands of Masi Masi, Mapia, Yamna, and Anns, near Takar, but found them wretched places for birds. At Kurudu illness prevented us from doing much work. We also surveyed Tana Mera. The chief of Masi Masi and his brother came with me to Takar, and were of great help: but for their wonderful skill as canoe-men we should all be still at Takar, prisoners of the surf. The whole of this coast is almost unapproachable on account of the Pacific swell, and I feel that I got away very cheaply with the sacrifice of about the third of our catch, including the only crown-pigeon. There were plenty, but we had no shot big enough to kill them on the high trees. At Tana Mera I would have done better, but there was no chance of my getting away again if I had stopped. The Birds of Paradise being mountain birds, we did very badly in them. We only got one *Diphyllodes*, a stray bird from the Wensudu mountains. Wensudu, being hilly, would be a better place than Takar. I bought three birds from a native from Wensudu, who had brought them to Yamna for sale.”

From **Kaiser Wilhelm's Land** we have a number of birds from **Konstantin-hafen**, collected by the late Mr. Kubary and the late Dr. Erik Nyman. Others from **Stephansort**, **Finschhafen**, **Simbang**, and the **Sattelberg**, from Dr. Nyman and Captains Webster and Cotton.

It is most interesting to see how considerably the fauna of the shore of the Huon Gulf (Simbang, Sattelberg, Finschhafen) differs from that of the Astrolabe

Bay (Konstantinhafen, Stephansort). Either the Finisterre Mountains or the Rawlinson Range seem to effect a boundary. From **New Britain** (Neu Pommern) and **New Ireland** (Nen Mecklenburg) we have only odds and ends, duplicates from the late Herr Th. Kleinschmidt, from an orchid-hunter, and so on. From **New Hanover** we received a small collection from Captain Cayley Webster, which Hartert has described in the Appendix to Captain Webster's book, "Through New Guinea." This collection contained some interesting new forms, such as a remarkable Kingfisher and a *Nasiterna*. From the northern coasts of **British New Guinea** we have an interesting collection from Mr. Albert S. Meek, from **Collingwood Bay** and **Milne Bay**. The fauna of these places resembles that of the shores of Huon Gulf. Mr. Albert S. Meek sent us also large collections from **Trobriand**, **Egum**, **Goodenough**, and **Ferguson** (the two northern islands of the D'Entrecasteaux group), **Woodlark** and the **Louisiade** Islands.

From the mountains of British New Guinea we have received a considerable number of important contributions. The more important ones are the collections made by a half-caste gentleman, named Anthony, in the **Mailu** district, inland of Orangerie Bay; in the **Eafa** district, between Mounts Alexander and Bellamy, at elevations of from 5000 to 6000 ft.; the **Oriori** and **Moroka** districts, on **Mount Scratchley** and in other places of the **Owen Stanley Range**. Others have been received from the London merchant firm of McIlwraith & McEcharn, which were collected by various Europeans and natives; others were gathered by Emil Weiske and his brother on the Upper **Brown River** and **Arca River**; others by Mr. Lix, at **Nicura**, near **Redscar Bay**.

Single specimens were purchased from various sources, especially some collected by Dr. H. O. Forbes, and by Goldie and Hunstein in British New Guinea.

Thanks to D'Abertis's energy and industry in the field, and the standard works on his collections by our friend Count Salvadori, we are well acquainted with the birds of the **Fly River**; but Fly River birds are sadly absent from the Tring collections.

No collector, nor, in fact, any traveller has even touched the Charles Louis Mountains, or the wide country between the lower Ambernoh and Fly River! The extent of the Fly River fauna is therefore unknown.

The birds from the **Aru Islands** are fairly well known. Besides some smaller collections made by William Doherty and Captain Cayley Webster (cf. Nov. Zool. 1896, p. 534), we have quite recently received a good Aru collection from Mr. Heinrich Kühn. The Aru fauna is exceedingly similar to that of New Guinea, especially that of the Fly River plains. Though not nearer to New Guinea than the Key Islands, Aru is not separated from New Guinea by deep sea, the sea being very shallow, while there is deep sea between Aru and Key. There are, nevertheless, a considerable number of forms which are quite restricted to the Aru group, though generally represented by very closely allied ones in New Guinea. The following notes of interest are extracted from Kühn's letters:—

"I have collected at **Dobbo**, on the small island of **Wammar** (or **Wammer**), on the west side of **Wokam** (or **Vokan**), on the north and south coast of **Kobroor**, on **Pulo Babi**, and in the middle of **Trangan**. The shooting season for the Great Bird of Paradise was unfortunately over. I was told that no birds had been shot this year on Trangan, so there I went, though the men were much afraid on account of some recent murders and quarrels on Trangan. As you probably know, the single shooting districts and trees, where the Paradise Birds come in the pairing season to

perform their nuptial dances, are let by the natives. Although the Trangan people had never seen a white man before on their island (only the Arunese trade in Trangan), they would not let me have a tree for an acceptable price. They asked two elephant tusks of a cubit in length, and 30 kapala—*i.e.* 30 gongs, worth 10 to 25 guilders. Three different owners asked the same price, saying that it was done by order of their king. The natives also twice showed hostility to my men, which forced me to leave Trangan sooner than I intended. Trangan is a sandy island, to a great extent covered with tracts of high grass, alternating with medium-sized forest, and has some fresh-water rivers. There are a few small hills of sandstone and coral-limestone. Only two or three salt-water creeks extend deeply into the land, the largest of which, Soengi Sarmatoe, I went up, sailing and paddling. Even Chinese were only known by name on Trangan, and my interpreter was repeatedly asked if I was a Chinese! In Dobbo I complained to the Rajah about the outrageous price asked for shooting stations on Trangan, and he said it was true that he had given orders to ask these prices to prevent theft and trouble, but they were not meant for Europeans. If he had known that I was going to Trangan he would have given me a man, to prevent trouble. This was very kind, but too late now! I have, however, left a man on the Aru Islands with instructions to collect those birds which we did not obtain this time."

The birds from the Key and South-East Islands are discussed by Mr. Hartert in another series of articles.

1.—PITTIDAE.

1. *Pitta atricapilla atricapilla* Quoy et Gaim.

The typical *atricapilla*, generally called *P. nooaequineae*, seems to be distributed all over New Guinea. We have specimens from various places in British New Guinea—where it seems to be an inhabitant of the plains rather than of the mountains—especially a fine series collected by Meek at Milne Bay and Collingwood Bay, from Mt. Cameron, 2000 ft. above the sea, from Kapaur and Etna Bay in Dutch New Guinea, and from Konstantinshafen and Simbang in Kaiser Wilhelm's Land. We have not been able to find differences between the birds from the various parts of New Guinea, nor can we distinguish those from Mysol, whence Mr. Kühn sent us a good series. Mr. Kühn sent it also from Wokan, Kobroor, Trangan, and Dobbo, Aru Islands, and we cannot separate these either from New Guinea specimens. They are not smaller, nor do they differ in colour. The *males* of *P. atricapilla* are larger and more highly coloured than the *females*.

2. *Pitta atricapilla méfoorana* Schleg.

The black-headed *Pitta* of Méfoor, or Mafor, differs from *P. atricapilla atricapilla* in several important characters. The feathers of the lower rump are of a beautiful silvery blue; the tail is black, with green tips of a few millimetres to 1 cm. in extent only; the blue of the abdomen is deeper, finer, and slightly more extended; there is a narrow silvery bluish glossy line separating the black throat from the green breast. There is never any white speculum on the wing. This speculum, however, is often very restricted, and sometimes, though very rarely, absent in *P. atricapilla atricapilla*. We have a series of nine collected by Doherty in 1897.

3. *Pitta atricapilla rosenbergi* Schleg.

Known only from Misori Island. Differs from *méfoorana* in the following characters. The breast is devoid of the fine metallic gloss; the red of the abdomen extends to the breast, which has no black patch; the tail is quite black, with only an indicated or very narrow greenish tip to the rectrices. We have nine skins collected by A. B. Meyer's and Bruijn's hunters.

4. *Pitta mackloti mackloti* Temm.

This *Pitta* is evidently distributed over the greater part of New Guinea and several of the adjacent Papuan Islands. We have received specimens from Mt. Cameron, 3000 ft.; Eafa District, between Mts. Alexander and Bellamy, 5000 to 6000 ft.; Dorey, Kapaur (Doherty); Mysol (Kühn, Guillemard). Altogether 47 specimens.

The shade and intensity of the red nuchal area varies much. It is much more beautiful in freshly moulted individuals, while it fades a great deal before the moult.

Individuals from Mysol agree with *Pitta mackloti kuehni*, except one labelled Mysol, from Dr. Guillemard's collection, which cannot be separated from typical *mackloti*.

5. *Pitta mackloti aruensis* subsp. nov.

We have received four adult individuals from Wokan, Aru group, from H. Kühn. They are distinctly smaller than typical *mackloti*, the wing measuring only 97 to 102 mm., averaging about 100; while the wing of typical *mackloti* is 104 to 112 mm. long, averaging about 106. Salvadori found six Aru specimens with wings only 97 to 100 mm. long (*Orn. Pap.*, ii. p. 398), and also the Aru birds in the British Museum are small. It is therefore desirable to separate the Aru form subspecifically on account of its smaller dimensions. Bill 19 to 20.5 mm.; metatarsus 35 to 36 mm. It is also remarkable that Aru birds sometimes have a strong blue wash on the back. We have one such individual from Wokan. Among 36 adult *P. mackloti mackloti* which we examined we found none with any blue shade above.

Type of *P. m. aruensis*: ♂ Wokan 4.10.1900. "Iris coffee-brown, feet plumbeous, bill blackish." Heinrich Kühn coll.

6. *Pitta mackloti lorise* Salvad.

This interesting form of *Pitta* was for the first time described from Su-a-u Island, off the South-East Cape of New Guinea. Mr. Meek has also sent a fine series from Milne Bay, and one from Chads Bay. He marks the iris as brown, feet slate-colour and bluish slate, bill black. This form, however, must also occur in other localities, for we have several individuals collected by Goldie, and one by Weiske, without exact locality.

P. lorise is a subspecies of the *mackloti* group, which differs from *mackloti* in the top of the head and hind-neck being dark chestnut. There are generally more or less reddish tips to the feathers on the forehead and hind-neck, but the latter is not so pale reddish as in *mackloti*. The feathers of the crown are darker—almost black—in the centre, and have sometimes faint bluish edges. There is

often a distinct, though narrow, blue line between the chestnut colour of the hind-neck and the green back; otherwise this form is like *mackloti*, and those with wider reddish tips to the feathers of the hind-neck differ very little from the latter.

7. *Pitta mackloti finschi* Ramsay.

This interesting *Pitta* is common on the D'Entrecasteaux Islands, Fergusson and Goodenough. We have ten skins collected by Meek. It was originally described from New Guinea, but we doubt the correctness of that statement. *P. finschi* agrees perfectly with *P. loriae* in the colouration of the head and neck, but differs from the latter form in the uniform blue upper surface from the neck backwards. Specimens said to have come from the same locality, and being perfectly similar, except in having an oil-green back, were identified by Ramsay as *females* of his *P. finschi*, while Dr. Finsch declared them to be *mackloti*. From Dr. Ramsay's words it is evident that these individuals were *P. loriae*. *Females* of *P. finschi* have the back just as blue as the *males*. Mr. Elliott (Monograph *Pittidae*, 1895) unites *P. finschi* with *P. cyanonota*, which is a Moluccan form. This statement is quite erroneous, as *P. cyanonota* is much smaller, has the fore-neck, head and nape lighter and more red, and a much narrower black line separating the blue chest from the red abdomen.

II.—PSITTACI.

1. *Chalcopsittacus ater ater* (Scop.).

The typical *ater* is apparently confined to the islands of Salwatty and Batanta, and to the opposite coast of New Guinea—Dorei Hum, Has, Sorong. We have never seen an authentic specimen from the northern coast of the Berau Peninsula, from Dorei, Andai, Mansinam, nor from Kapaur and Etna Bay. Our nine specimens are partly from Salwatty, partly without exact locality. The statement that it occurs on Waigiu is probably erroneous.

2. *Chalcopsittacus ater bernsteini* Rosenb.

Differs from typical *ater* generally in the following three characters: The feathers of the tibiae are more regularly and brighter red, especially on the inside. The forehead is more or less tinged with red on its foremost edge. The primaries have often a large bright red patch, from total absence or a mere indication to three centimetres in length. This last peculiarity is conspicuous in six out of nine examples from Mysol, while we cannot find it in one of our Salwatty series.

Ch. ater bernsteini is only known from Mysol, whence we have a series of nine.

3. *Chalcopsittacus scintillatus scintillatus* (Temm.).

Doherty bought a young bird with black head at Waropen, on the east coast of Geelvink Bay.

We have a very fine series from Dobbo, Trangan, and Kobroor (Aru Islands), but our series from New Guinea is very poor.

We cannot, therefore, at present decide whether the Aru form (*rubrifrons* of Gray) can be separated from true *scintillatus*. We may, however, remark that young individuals have little or no red on the forehead, and that the colour of

the shaft-stripes on the feathers of the neck and breast varies very much, according to age and freshness of plumage, and perhaps to sex in specimens from the same localities.

4. *Chalcopsittacus scintillatus chloropterus* Salvad.

This form inhabits British New Guinea, and meets with *C. scintillatus scintillatus* along the Fly River. We have three fine skins of *C. scintillatus chloropterus* from the Brown River, collected by Weiske.

5. *Chalcopsittacus duivenbodei* Dubois.

Besides three skins purchased from various persons, we have three others with indications of locality. One of these was purchased from Mr. van Renesse van Duivenbode, with the distinct statement that it was killed at Tana Mera, 140½°, on the north coast of Dutch New Guinea, near Humboldt Bay. From the evidence of other skins that came with this Parrot, we are confident that this statement is correct. Another was shot and skinned (poorly enough) by Captains Cotton and Webster, on November 18th, 1893, at Stephansort, and an adult *male* collected by Doherty in October 1897, at Takar, between Humboldt Bay and the Ambernoh River. Doherty marked the feet and bill as black, the iris as vermilion, with a black outer ring and inwardly yellow, the bare skin round the eyes, cere and chin blackish.

We have thus now a distribution of this singular and rare Parrot along the north coast from Takar to Stephansort in Kaiser Wilhelm's Land.

The specimen from Stephansort is more bluish on the hind-neck, and smaller than the others. The comparison of a series is therefore desirable.

6. *Eos fuscata* Blyth.

This well-known Parrot is only known from New Guinea and Salwatty, and the islands in the Geelvink Bay.

Dr. Meyer (*Zeitschr. f. ges. Orn.* 1886, p. 6, Taf. 1) described specimens from S. E. New Guinea as a different species, "*Eos incondita*," but we find that none of his characters hold good, and we are not able to separate any forms at present. It is true that specimens from Jobi and Ron are generally largest and finest, but they are matched by many others from the Berau Peninsula, Kaiser Wilhelm's Land and British New Guinea.

Eos fuscata is found in the plains, but it reaches to more than 6500 feet in the mountains of British New Guinea.

It is dimorphic, a red and a yellow phase, with intermediate colourations, being known. The yellow birds are neither the *females* nor the *males*, as our sexed material, especially that from Doherty and Dr. Erik Nyman, shows. Nor are they young, as we have a youngish bird with brownish-blackish bill and very small wings, which is red, though not so bright as adults.

We have before us 45 individuals.

7. *Eos cyanogenia* Bp.

Mr. Doherty sent us ten from Mefor (Mafor) Island, two from Biak and one from Korrido (Schouten Islands). "Iris orange, feet blackish, bill vermilion, cere black." A young *male* differs only from the adult birds in having blackish edges to the feathers of the neck and underside.

8. *Lorius hypoenochrous devittatus* Hartert.

One from the Brown River, collected by Emil Weiske, and six from Woodlark are quite alike, and agree with the type of this subspecies from Fergussou.

We have it also from New Hanover and New Ireland.

9. *Lorius hypoenochrous hypoenochrous* Gray.

The typical *hypoenochrous* is only known from the Louisiade group, whence we received it from Rossell and Sudest Islands.

10. *Lorius lory lory* (L.)

The distribution is remarkable. It inhabits North-Western New Guinea and the islands near it.

We have a large series collected by Doherty at Dorey, others from Andai, and, as far as we can make out from the material now in the Tring Museum, the typical *lory* is only found along the north coast of the Berau Peninsula.

In *L. lory lory* the under wing-coverts are red, but in young individuals the greater under wing-coverts are yellow with black tips, and the median and smaller ones are mingled red and blue, occasionally also with green. A red band below the occiput, which however is absent or only indicated in young birds. The deep blue colour of the breast is joined with the blue of the nape, but only in adult birds. The whole breast is red in young birds. A red band across the interscapular region is indicated, generally quite concealed, but sometimes apparent. Doherty marks the iris as "pale orange, feet black, bill orange, cere blackish."

Wing of adults: 160 (mostly *females*) to 165 (mostly marked ♂), and 168 mm. in one old *male*.

11. *Lorius lory major* subsp. nov.

Exactly like *Lorius lory lory*, but the wing shorter, the bill on the average larger, the blue of the hind-neck generally lighter.

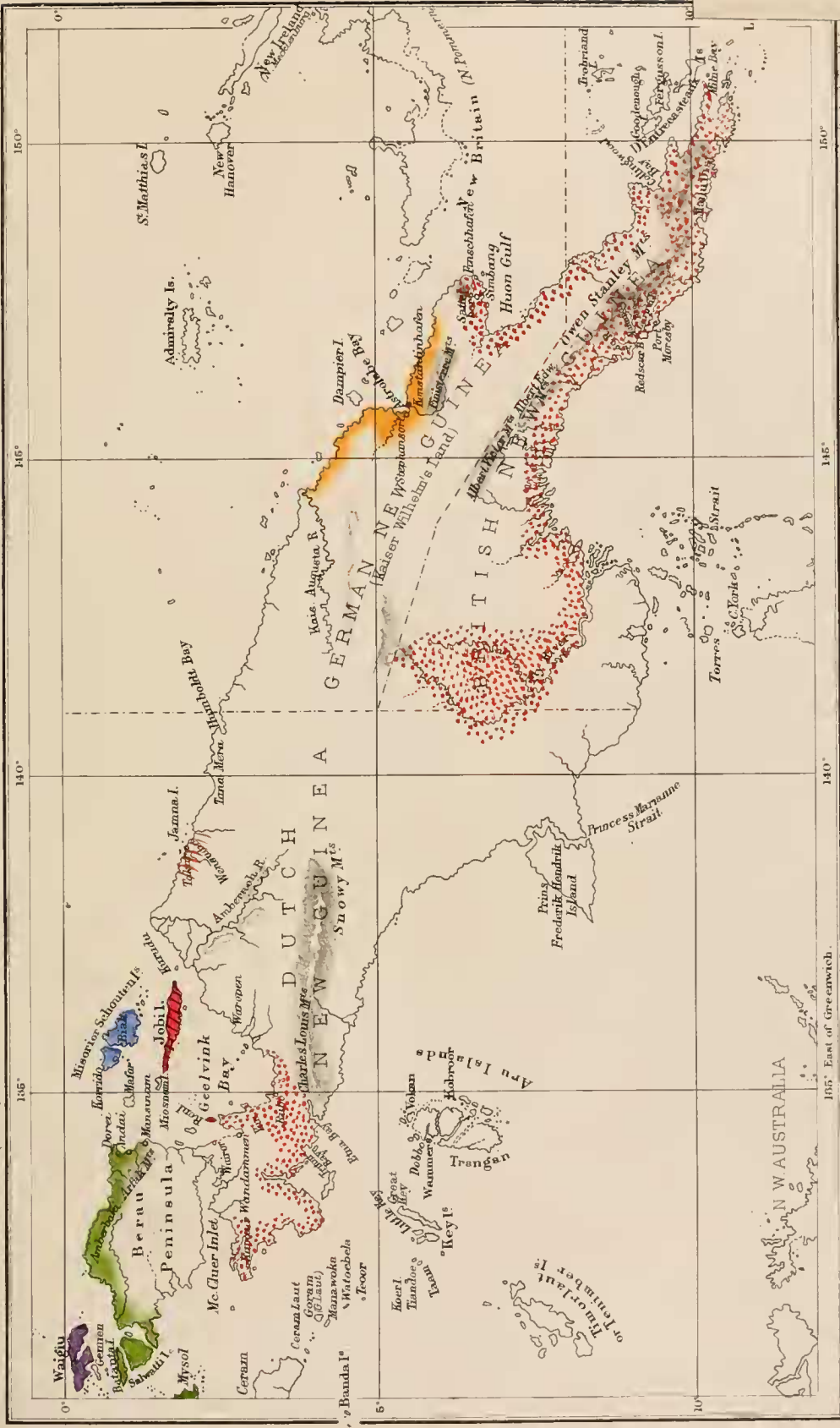
Wing 167 (♀) to 175 and even 179 mm.

We have a series collected by H. Guillemard on Waigiu. The difference from *L. l. lory* is not obvious at a glance, but perhaps more important for the birds than the colour-differences on which some of the other forms have been founded.

12. *Lorius lory erythrothorax* Salvad.

Differs from *Lorius lory lory* in the lesser extension of the blue colour on the underside, the breast being uniform red, and no blue-black line running from the breast to the hind-neck. The red band across the upper interscapular region is as a rule more obvious.

We have a fine series from Kapanr, on the western coast of New Guinea, south of the Gulf of Berau or M'Cluer's Inlet, from Doherty; several from Etna and Triton Bay (Webster); a series from Ron Island in the southern part of Geelvink Bay; a small series from various localities in British New Guinea (Mt. Cameron, Oriori, Gaivara, between the Rivers Laroki and Vanapa, and from Nicura), three from Simbang, and one from the Sattelberg in Kaiser Wilhelm's Land.



■ *L. l. lory.*
■ *L. l. cyanochaeta.*
■ *L. l. lory.*
● *L. l. erythrorhynchus.*
■ *L. l. johannis.*
■ *L. l. embuadori.*
 Doubtful form.
 L. l. minor.

DISTRIBUTION OF LORIUS LORY.

150° East of Greenwich.

145°

140°

135° East of Greenwich.

10°

0°

We are not able to separate any of these from the material now before us. At first sight it would appear as if the individuals from farther east have a larger blue area on the undersurface, but this apparent difference seems to be due to the different preparation of the skins. There are considerable differences in size, but they cannot serve to distinguish any more races, as they vary too much in specimens from the same places. We are quite unable to separate the skins from Ron Island from any of the others.

We have no specimens from Rubi, in the extreme south of the Geelvink Bay, where birds seem to be smaller, and are termed "*rubensis*" by A. B. Meyer.

13. *Lorius lory jobiensis* Meyer.

We know this form in typical specimens only from Jobi Island, whence we have 15 adult examples before us. It differs from *lory major* and *erythrothorax* principally in its deep blue under wing-coverts. The breast is bright red with a rosy tinge, the hind-neck blue, the bill large and powerful; the red band across the interscapular region is generally well defined. Wing of adult *males* about 175 mm.

14. *Lorius lory* subsp. ?

Two *males* and a *female* from Takar have the same rosy tinge on the breast as *jobiensis*, the hind-neck is blue, but the bill is smaller, the wings shorter, the same as in *salvadorii*.

We believe that this form stands in the middle between *jobiensis* and *salvadorii*, agreeing more with the former in its colours, with the latter in its dimensions. We do not, however, consider our series of three large enough to name this form without further research. Wing about 160 mm. only.

15. *Lorius lory salvadorii* Meyer.

Differs from *jobiensis* principally in its much smaller size, especially the bill and wings. The latter measure only about 160 mm. Besides the smaller size the red of the breast is somewhat more scarlet, without a rosy tinge, the hind-neck and upper back is deeper, almost black, also the upper abdomen is generally darker, the under tail-coverts generally, but not always, deeper blue. The smaller size is the most constant character of this form.

It is common near Konstantinhafen and Astrolabe Bay in German New Guinea, whence we have eight specimens. The specimen mentioned as coming from Simbang in Nov. Zool. III. p. 254 is also from Konstantinhafen.

16. *Lorius lory cyanauchen* (S. Müll.)

This remarkable subspecies differs from all the rest of this group in the total absence of the red nuchal band in the adult bird.

It is only known from the Schouten Islands or Misory. We have received it from Mr. Doherty from Biak and Korrido, three in all. One of these was bought alive, and was the most perfect mimic Doherty had ever heard. "Iris: orange, with an inner and outer dark line, the former defined inwardly with a silvery ring; feet black; bill dull orange, ochreous at tip; cere and skin round eyes black."

THE GENUS TRICHOGLOSSUS.

17 *Trichoglossus haematodus haematodus* (L.).

We unite a number of forms of Lories into one specific group, because they all agree in having a dark mask, a greenish ring round the neck, reddish breast with dark borders to the feathers, dark green or bluish abdominal patch and a large yellow area in the central portion of the quills. All characters found in any of these forms are represented or indicated in one or more of the others.

Trichoglossus novaehollandiae, *septentrionalis* and *rubritorques* from Australia might also be associated with this group, but *T. ornatus* from Celebes, with its wholly black quills, presents the most aberrant and singular characters, and is therefore best considered as specifically different from the *haematodus* group.

The typical *haematodus* has the forehead blue, the hind-neck and lower end of throat green, the breast yellow, more or less tinged with orange-red, very rarely quite orange-red, with vanishing blackish green edges to the feathers. Not very large. Timor, 7 specimens before us. (Nov. Zool. V. p. 119, 1898.)

18. *Trichoglossus haematodus fortis* Hart.

Perfectly like typical *haematodus*, only (bill and wings) larger, besides some minor differences in colouration. Sumba, 11 skins before us. (Nov. Zool. V. p. 120, 1898.)

19. *Trichoglossus haematodus forsteni* (Temm.).

The adult bird has the head brownish purple, with the forehead bluish, an indication of a purple-blue patch behind the light green collar, the breast uniform bright red, middle of abdomen purple. These adult birds appear very widely different from *haematodus*, but the young ones are on the upperside exactly like *haematodus* and *fortis*, having the nape and area behind the collar quite green. The red breast-feathers have in the young birds a yellow tinge and dark green edges, and the abdomen is green, not purple. It is thus clearly shown that there is no new character in *forsteni*, and that it can therefore be treated as a representative of the *haematodus* group. Sumbawa, 8 specimens. (Nov. Zool. III. p. 572, 1896.)

20. *Trichoglossus haematodus djampeanus* Hart.

In every way like *forsteni*, from which it differs only in having a slightly longer wing and larger bill, the forehead deeper blue, and a large and conspicuous purple patch behind the light green collar. (Cf. Nov. Zool. IV. p. 172, 1897.) Djampea Island, six specimens.

21. *Trichoglossus haematodus mitchelli* Gray.

Hardly differs from *forsteni* except in the colour of the head. The forehead is greenish, not bluish, the nape dark cherry-red. The fully adult bird has not the slightest tinge of yellow on the deep red breast-feathers; the "Key to the species" of the genus *Trichoglossus* in *Cat. B. Brit. Mus.* XX. p. 49 is therefore misleading. Younger individuals, however, have greenish-blackish edges to the red breast-feathers, and generally a lot of yellow towards the dark grey bases and in front of the dark tip as well. The upper part of the abdomen is purple in fully

adult individuals, dark green in young birds. Very young birds have also a blackish bill. (Cf. Nov. Zool. 1896, pp. 265, 296, 297.)

Lombok. A series of 20 in the Tring Museum, all collected by Doherty and Everett.

22. *Trichoglossus haematodus nigrogularis* Gray.

Differs from *T. h. cyanogrammus* in the following peculiarities: the chest is of a lighter red with a distinct orange-yellow shade in front of the black edges, which are much narrower. The middle of the abdomen is more pronouncedly and much more frequently, in fact nearly always, tinged with a purplish blue-black. Wings and tail are generally a little longer. The head is exactly as in *T. h. cyanogrammus*.

We know *nigrogularis* only from the Arn Islands and Southern New Guinea along the lower Fly River, as well as from the Key group. Its occurrence in Kaiser Wilhelm's Land is reported by Dr. von Madarasz, but this is doubtless erroneous.

On the Key Islands we should expect *T. h. cyanogrammus*, which we have also received from there, but *T. h. nigrogularis* seems to be more regularly met with. We have at present 18 skins.

23. *Trichoglossus haematodus cyanogrammus* Wagl.

Feathers round the face stiff and blue, occiput purplish black with blue-grey central streaks. Interscapular feathers with wide red concealed bands. Lower throat and upper breast bright red without an orange tinge near the black edges, which are rather wide, from 1—3 mm.

The distribution of this form is peculiar. It extends over the Southern Moluccas (Amboina, Ceram, Burn), southwards along the South-East Islands, or Zuid-Ooster Eilanden (Ceram-laut, Goram-laut, Goram, Manawoka, Watoebela, Kisoei, Koer, and Tiandoe Islands). Those from the South-East Islands, Amboina and Ceram, are apparently the most typical examples, although some few of them show greenish stripes on the centre of the crown, and a stronger tinge of purple on the nape. Nevertheless we can consider all the examples from the above mentioned islands as belonging to typical *cyanogrammus*.

We have received also (from Mr. Kühn) two specimens labelled "Key Islands," March and April 1900, which are doubtless of the form *cyanogrammus*. These were among a lot of Key Island birds collected for a dealer for sale, while among the birds specially collected for the Tring Museum we received only *nigrogularis*.

Considering the distribution of *cyanogrammus* along the South-East Islands we should expect this latter form on the Key Islands, and we see no reason why it should not occasionally occur there; while the usual Key form seems, curiously enough to be the same as that of Aru, namely *nigrogularis*.

The *cyanogrammus* extends also to Mysol, where it is common, but a large proportion of Mysol examples have the blue-black edges to the red breast-feathers unusually wide.

The *cyanogrammus* is spread also over Batanta, Salwatti, Waigiu, and over the Berau Peninsula—or its coastal regions at least—as well as to Rubi, Jobi, Ron, and Kapaur. But the examples from these localities (Salwatti, Waigiu, Jobi and Western New Guinea) show, almost without an exception, the green stripes in the

centre of the crown more developed, the nape deep purple or cherry-brown, and thus are nearer to our *intermedius*, than to *cyanogrammus*. There are in the Tring Museum at present 63 skins.

24. *Trichoglossus haematodus intermedius* subsp. nov.

A series of eight specimens of Lories from Kaiser Wilhelm's Land stand somewhat between *cyanogrammus* and *massena*. They agree with *cyanogrammus* in the broad edges to the red breast-feathers, and with *massena* in the colouration of the head, the ear-coverts not being blue, but with a greenish tinge, the centre of the crown with green streaks, the nape dark cherry-brown or reddish.

The type of *intermedius* is an adult male collected at Stephansort by the late botanist, Dr. Erik Nyman, in December 1899. A larger series will perhaps enable us to separate even two forms, instead of only one, as we do at present within German New Guinea. Our five specimens from the Huon Gulf (Sattelberg and Simbang, Erik Nyman coll.) have the collar on the hind-neck apparently a little more yellowish, and are smaller (wing only 132—142 mm.) and have smaller bills, while our three from the Astrolabe Bay (Stephansort and Bongu) have the collar rather greenish and larger bills and wings (146—152 mm.). The former agree in size with *massena*, the latter more with the majority of *cyanogrammus*. The Astrolabe Bay specimens are most similar to the series from Dutch New Guinea (Kapaur, Jobi, Ron, Berau Peninsula, Waigiu, Batanta), though the western birds are partly more the typical *cyanogrammus*, some being indistinguishable from the latter, some not separable from our *intermedius*. Generally the ear-coverts are greener than in *intermedius*, the nape less reddish. The greenish collar is more yellowish in the western birds, and perhaps also in those from the Astrolabe Bay. We have, unfortunately, not received any examples from Takar, but according to Comte Salvadori *cyanogrammus* extends to the upper Fly River, while the lower Fly River region is inhabited by *nigrogularis*. The reported occurrence of the latter in German New Guinea cannot be credited.

25. *Trichoglossus haematodus massena* Bp.

Differs from *cyanogrammus* in the narrower blackish edges to the red breast-feathers, the different colouration of the head (ear-coverts not bluish, but with slightly greenish stripes, centre of crown with greenish stripes, occiput deep cherry-red or brown), and generally smaller size. Generally the collar is slightly more greenish.

The original locality being "Insulae Polynesiae" (*Rev. et Mag. Zool.* 2 ser. 6, 1854, p. 157), the birds from the New Hebrides and New Caledonia must be considered as the typical *massena*. We have four skins from the New Hebrides, and it seems that the blackish edges to the red breast-feathers are narrowest in these, but they are equally narrow in some specimens from the Louisiade group. The apparently greater extent of the red colour in the New Hebrides birds and the lighter shade of the same is perhaps due to preparation and the treatment of the skins. We are therefore at present not able to make further divisions of *massena*, though New Guinea specimens have apparently the widest, New Hebrides examples the narrowest, dark edges on the breast.

We have *massena* only from the New Hebrides, Louisiade group, Guadalcanar, Rubiana, and British New Guinea. From the last locality we have only one from Hall Bay (D'Albertis' coll.), two from Nicura (Lix coll.), one from Oriori (Anthony coll.).

26. *Trichoglossus haematodus flavicans* Cab. & Rchw.

Like *massena*, but generally of a slightly more yellowish green, a little larger, and the breast-feathers light and with very narrow edges.

We have two from New Hanover (Capt. Webster coll.). It is also known from the Admiralty and Echiquier Islands.

27. *Trichoglossus haematodus rosenbergi* Schleg.

A most remarkable form characterised by the enormous extent of the greenish yellow band on the nape, which covers the whole hind-neck, the dark blue head, the quite blue-black abdomen, and very wide deep blue edges to the red breast-feathers.

Known only from Korrido and Biak, in the Geelvink Bay, whence we have six skins from Doherty. "Iris orange; feet blackish; bill orange-scarlet." (Doherty.)

28. *Trichoglossus haematodus caeruleiceps* Alb. & Salvad.

Differs from *nigrogularis* in having the whole head blue. Only the type is known from the Kataw River. It may be an abnormality of *nigrogularis*, but if the observation is true, that it was flying with other blue-headed individuals when shot, it must be a local form of the same group.

[We are convinced that neither *T. coccineifrons*, nor *T. verreaucius*, are valid species or subspecies, but that they are abnormally coloured examples or hybrids.]

29. *Glossopsittacus goldiei* (Sharpe).

The *female* does not differ from the *male* except in being slightly smaller—wing about 5 mm. shorter. The birds in which the crown is purplish brown and the red confined to the forehead are immature. The purplish striped occipital band is more or less developed in the series before us, irrespective of sex.

We have received this beautiful little Lory from 4000 and 5000 ft., on the Aroa River (Emil Weiske coll.), from Mt. Gaivara and the Moroka District, 3000 to 6000 ft., in the Owen Stanley Range (Anthony coll.).

30. *Hypocharmosyna wilhelminae* (Meyer).

Of this apparently rare little Parrot we have only three bad Arfak trade-skins and one *male*, without exact locality, collected by Emil Weiske in British New Guinea. An apparent *female* wants the red patch on the back, and the purple of the rump extends further upwards.

31. *Hypocharmosyna placentis placentis* (Temm.).

This common form from the Western Papuan region is before us from Goram-lant, Manggoer (Kühn), Mysol, Koer and Key Islands. Altogether 41 specimens.

It differs from *subplacens* in having a little blue patch on the nropygium, generally deeper blue ear-coverts, and as a rule a darker greenish and less defined yellowish cap. The blue uropygial patch is only developed with age, as it is only indicated or absent in very young birds.

32. *Hypocharmosyna placentis subplacens* (Scl.).

Mount Gayata, Richardson Range, 2000 to 4000 ft., Brown River (Weiske coll.), Milne Bay (A. S. Meek coll.), Woodlark Island (A. S. Meek coll.), Sattelberg (Erik Nyman coll.). We have 38 in all.

It may, with a very large material, be possible to subdivide *subplacens* again, as it seems as if individuals from the higher mountains are finer, having larger bills and a larger blue auricular patch, and that the Woodlark birds have slightly smaller bills than those from British and German New Guinea, and the auricular patch generally paler and more lilac; but at present we could not speak with certainty about the constancy of any of these features.

33. *Charmosynopsis pulchella* (Gray).

Besides a series of 13 skins from the Beran Peninsula, we have :

One *male* (not sexed), collected by H. O. Forbes at Moroka, 5000 ft., in November 1885.

One *male* (not sexed) from Moroka, 3000 to 6000 ft. (Anthony coll.).

One *female* (not sexed), Mt. Gaivara, British New Guinea, 2000 to 9000 ft., 1898 (collector unknown).

One *male* (not sexed), Eafa District (Anthony coll.).

34. *Charmosyna stellae* A. B. Meyer.

We have before us :

Seven adults and one immature bird from Mt. Cameron, Owen Stanley Range, 5000 and 6500 ft. (Anthony coll.). "Iris yellow, feet orange, bill red."

One *female*, Mt. Gaivara, 2000 to 9000 ft. (native collector).

Four from between Mts. Alexander and Bellamy, about 5000 to 6000 ft., October 1895 (Anthony coll.).

One ♀ ad., Owen Stanley Range, about 7000 ft. (Hunstein coll.).

Two without definite locality (H. O. Forbes coll.).

Two without definite locality (collector unknown).

Two immature birds from the Upper Aroa River, 3000 to 7000 ft. (Emil Weiske coll.).

One *female*, with no locality, labelled by A. Boucard (according to handwriting) as being brought home by Mons. Laglaize; looks exactly like a *female* of *stellae*, but is smaller (wing only 132 mm.), as opposed to 142 to 145 mm. in ♀ *stellae*.

Mivart figures the *female* of *josephinae* with a green tail. Our specimen, however, is a little larger than our two *males* of *josephinae*.

If this bird is *josephinae*, it would go to prove that the latter form is only a subspecies of *stellae*.

35. *Oreopsittacus grandis* Grant.

We have now before us eight specimens of this large form of *Oreopsittacus* from the following places :

Mt. Scratchley, Moroka District, Mt. Knutsford, (11,000 ft., Anthony coll.), Mt. Owen Stanley, 5000 to 7000 ft.

THE GENUS CYCLOPSITTA.

36. *Cyclopsitta edwardsi* Onst.

We have before us a large series from Konstantinhafen (Kubary), Simbang (Cotton and Webster, Nyman), and Stephansort (Nyman), in Kaiser Wilhelm's Land. The iris is red in both sexes. The adult *male* has the breast red, the *female* and young *male* green. The very young bird has the cheeks covered with shorter

feathers of a yellowish colour with red spots, the ear-coverts narrower and greenish yellow.

37. *Cyclopsitta desmaresti desmaresti* (Garn.).

A large series from Kapaur and Dorey.

38. *Cyclopsitta desmaresti occidentalis* Salvad.

This form is obviously only a subspecies of the former. We have two typical specimens, examined and named by Count Salvadori. They differ from typical *desmaresti* as follows :

There is no blue spot on the occiput.

The blue subocular spot is smaller, being merely a narrow line, and much lighter and more greenish.

The whole head, including the cheeks, ear-coverts and upper throat, are golden yellow.

These differences are, however, more or less variable. We have several *desmaresti* in which the blue occipital spot is not visible. The blue subocular spot is lighter than usual, but not less extended in three skins from uncertain locality, but of the usual Arfak make. These three skins have the sides of the head orange-yellow. They stand thus intermediate between *desmaresti* and *occidentalis*, possibly forming an intermediate, third subspecies. This, however, cannot be decided before we know their exact distribution.

39. *Cyclopsitta desmaresti blythi* Wall.

Differs from *Cyclopsitta desmaresti occidentalis* in the absence of the blue subocular spot.

We have, nevertheless, a *male*, shot on Mysol in December 1883 (Powell coll.), which has this spot indicated, showing as it does two or three greenish blue feathers under the eyes.

This subspecies is only known from Mysol, whence we have two from the *Marchesa* voyage and one from H. Kühn.

40. *Cyclopsitta cervicalis* Salvad. & D'Alb.

We have received two specimens from the Upper Brown River, collected by E. Weiske, which agree with Salvadori's and D'Albertis' descriptions of the young bird. These being the only individuals of *cervicalis* in the Tring Museum, we are unable from personal experience to confirm the descriptions of the extraordinary changes of plumage between the young and old of this species. If these changes are correct, they are unique in the genus *Cyclopsitta*, and also indicate that *cervicalis* is only an extreme form of *desmaresti*.

41. *Cyclopsitta diophthalmus diophthalmus* (Hombr. & Jacq.).

Beran Peninsula to Mysol (in Tring from Kühn), Waigiu, Salvatty and Koffiao, along the northern coast of New Guinea to Kaiser Wilhelm's Land and to Mt. Astrolabe (Goldie). Specimens from Mt. Astrolabe and Kaiser Wilhelm's Land have been separated as

42. *Cyclopsitta diophthalmus coccineifrons* Sharpe.

Salvadori united the two former. Reichenow (*J. f. O.* 1897, p. 208) says that his *coccineifrons* (1 ♂ and 2 ♀♀) have the yellow crown-band wider and purer, the green of the upperside lighter, the red on the cheeks and forehead of a different shade. A. B. Meyer (*J. f. O.* 1892, p. 256, and *Abh. Ber. Dresden Mus.* 1893) quotes similar differences. We have only one *male* from Simbang (Nyman coll.) and three bad *females* from Konstantinhafen (Kubary coll.). These seem to show that the red colour of the head is not different from that of *C. diophthalmus diophthalmus*, and that the red colour on the forehead is not less extended, but that the green is apparently more yellowish, especially on the breast. The red on the head is perhaps a faint shade deeper. A *female* from the Ambernoh River seems to agree with those from Konstantinhafen. *C. d. coccineifrons* cannot yet be regarded as a well-established form.

43. *Cyclopsitta diophthalmus aruensis* (Schleg.).

This is clearly only to be considered as a subspecies of *diophthalmus*. The *males* of the two forms are very much alike. The red colour of the head of *aruensis* is not always lighter, but of a somewhat more scarlet tinge, the yellow line behind the red on the crown is ill-defined, the blue line under the cheeks reaches the chin, while it is separated from the latter by a few green feathers in the typical *diophthalmus*. The spot before the eye is smaller and less bluish.

The *female* of *aruensis* differs very much from that of typical *diophthalmus*. The forehead is pale blue instead of red, but there are sometimes red bases to the feathers of the forehead; the buff area on the sides of head is less extended and less orange; the red line under the eye is absent in our two specimens.

This form is found on the Aru Islands, along the Fly River and parts of the adjacent country, which is shown by our possessing a *male* from the Brown River, collected by Emil Weiske. It is, however, possible that a greater material may necessitate the separating of the Aru individuals from those of New Guinea. Our one *male* from the Fly River (D'Albertis' coll.) and the one from the Brown are evidently identical, and seem to exhibit a darker red colour on the head, and a more distinct yellow line on the sinciput. We have nine before us.

44. *Cyclopsitta melanogenia melanogenia* (Schleg.).

We know this bird only from the Aru Islands, whence Heinrich Kühn and Captain Webster sent us four *males* and three *females*. According to Count Salvadori it occurs also along the Fly River, but we have no specimens from there, and cannot therefore compare them with birds from the typical locality.

This and the following form have wide yellow borders to the inner webs of the secondaries.

45. *Cyclopsitta melanogenia suavissima* ScL.

Differs in both sexes from *C. m. melanogenia* in having the forehead dark blue instead of dull black.

Hab: South-Eastern New Guinea. We have the following specimens:— 3 ♂♂, Brown River (Weiske); 1 ♂, Mount Gayata, Richardson Range, 2–4000 feet (Weiske); 1 ♂, Oriori district (Anthony); 1 ♀, Eafa district, 5000 feet (collector unknown); 1 ♀, Sogere, 2000 feet, 16.12.1885 (H. O. Forbes); 1 ♀, Popo Inlet (Anthony); 1 ♂ and 4 ♀♀ without exact localities (Goldie).

Mr. De Vis has described (*Report New Guinea*, 1896-97, Appendix AA, p. 81) as a new species a *C. nanus*. From his description it appears to us that it is only a slightly aberrant specimen of *suavissimus*, which has the wing about $2\frac{1}{2}$ mm. shorter than our smallest *male*.

46. *Cyclopsitta nigrifrons nigrifrons* Rehw.

This bird is only known from the Augusta River in northern German New Guinea. We have at present no specimen before us, but Mr. Hartert has seen the types in Berlin. Wing 90 mm. (Rehw.); forehead black.

47. *Cyclopsitta nigrifrons macilwraithi* Rothsch.

When Mr. Rothschild described this bird as a new species we did not know the sexual differences in the various forms of *nigrifrons*. The only tangible difference between this form and typical *nigrifrons* is the slightly smaller size. The forehead is also more bluish. We have before us in the Tring Museum one *male* from British New Guinea (without exact locality) and the *female* type. For the latter, in the original description (*Bull. B. O. C.* vol. vii. p. 21), the locality was stated to be the north coast of British New Guinea, but we have now reason to believe that this is erroneous, as Anthony appears not lately to have collected north of the Owen Stanley Range. Wing ♂ and ♀ 87 mm.

More material is required in order to confirm the distinctness of this form from the former, and to explain its distribution!

48. *Cyclopsitta nigrifrons amabilis* Rehw.

This form was described from the Huon Gulf. We have a good series from Milne Bay and Collingwood Bay, and one from the Sattelberg (A. S. Meek and E. Nyman coll.), which agree with Professor Reichenow's diagnosis. The principal difference between this and the other two forms of *C. nigrifrons* is the much smaller size. Our series have the wings 80 to 82 mm. It consists of 5 adult *males*, 3 young *males* and 3 *females*.

The forehead is dull dark blue, in colour between the blue on the head of *suavissima* and the black of *C. m. melanogenia*.

We have kept the *nigrifrons* group specifically distinct from the *melanogenia* group, because the *females* of these two groups offer such very striking differences, while the *males* can always be distinguished by the absence or presence respectively of the yellow edges to the secondaries and of the pale yellow band on the throat. We must, however, remark here that *Cyclopsitta guillemi* III., although in other respects resembling the *melanogenia* group, lacks the yellow bases to the secondaries like the *nigrifrons* group. We have unfortunately no specimens yet of this rare Salwatty species.

According to our present belief the genus *Cyclopsitta* consists now of the following forms:—

1. *Cyclopsitta salvadorii* Oust.

North coast of New Guinea, east of Geelvink Bay.

Evidently a very distinct species.

2. *C. edwardsi* Oust.

Kaiser Wilhelm's Land.

Very distinct species.

3. **C. desmaresti desmaresti** (Garn.).

Berau Peninsula, near Dorey, numerous.

Connected with *occidentalis* by intermediate forms, which may be separable again as an intermediate subspecies, though this is not probable, considering the close neighbourhood of the countries inhabited by these two forms. See *anted*, p. 73.

4. **C. desmaresti occidentalis** Salvad.

Salwatty, Batanta, and western coast of the Berau Peninsula. See *anted*, p. 73.

5. **C. desmaresti blythi** Wall.

Mysol. See *anted*, p. 73.

6. **C. cervicalis** Salvad. and D'Alb.

South-Eastern New Guinea from the Brown River to the Fly River. See *anted*, p. 73.

7. **C. diophthalmus diophthalmus** (Hombr. & Jacq.)

Salwatty, Mysol, Koffiao, Waigiu, and Berau Peninsula,

8. **C. diophthalmus coccineifrons** Sharpe.

Replaces No. 7 in parts of British New Guinea and in Kaiser Wilhelm's Land, but more material must be studied to confirm its validity and distribution. See *anted*, p. 74.

9. **C. diophthalmus aruensis** (Schleg.).

Aru Islands. The specimens from South-Eastern New Guinea are perhaps separable! See *anted*, p. 74.

10. **C. diophthalmus virago** Hart.

Fergusson and Goodenough Islands, D'Entrecasteaux group.

The *male* is very much like that of *C. d. aruensis*, but the *female* has a large red patch on the forehead. See Nov. Zool. II. p. 61 (1895), Nov. Zool. VI. pl. IV. (1899).

11. **C. diophthalmus inseparabilis** Hart.

Sndest Island, Louisiade group.

In this remarkable form the sexes are alike, and resemble the *female* of *virago*. Nov. Zool. V. p. 530 (1898), Nov. Zool. VI. pl. IV. (1899).

12. **C. diophthalmus macleayana** Rams.

North Queensland.

The *female* closely resembles that of *virago*, the *male* those of *virago* and *aruensis*. The *female* differs chiefly from that of *virago* in having the red frontal patch surrounded with blue, and the lores more blue. The *male* differs from those of both *virago* and *aruensis* in its blue loreal patch and line on the forehead, and some other minor differences. Cf. Nov. Zool. II. p. 61, V. p. 530, VI. pl. IV.

13. **C. coxeni** Gould.

This large form of Eastern Australia, from Southern Queensland to New South Wales, is so large, and the forehead has practically no red in both sexes (which differ but slightly), that it seems right to keep *coxeni* specifically separate.

14. **C. melanogenia melanogenia** (Schleg.)

Aru Islands.

15. *C. melanogenia suavissima* Sel.

South-Eastern New Guinea. See *antea*, p. 74.

16. *C. nigrifrons nigrifrons* Rehw.

Augusta River in northern German New Guinea.

17. *C. nigrifrons macilwraithi* Rothsch.

Exact distribution **not** known. Part of British New Guinea. Differs from *C. n. nigrifrons* in its shorter wing and more bluish forehead. See *antea*, p. 75.

18. *C. nigrifrons amabilis* Rehw.

Huon Gulf to Milne Bay and Collingwood Bay. Differs in being smaller. The forehead dark blackish blue. See *antea*, p. 75.

19. *C. guglielmi* III. (Schleg.).

Salwatty and opposite coast of New Guinea.

We have thus at present 10 species in 19 forms. The Hand-list of Dr. Sharpe (1900) enumerates 19 species, Salvadori, *Cat. B. Brit. Mus.* XX. (1891), 15 species.

49. *Microglossus aterrimus aterrimus* (Gm.).

The typical *Microglossus aterrimus* is evidently distributed all over New Guinea. We have the following specimens:—

Two Berau Peninsula, from Bruijn's hunters.

One Dorey (Guillemard coll.).

One ♂ Takar (Doherty coll.).

One Stephansort, Dec. 1899 (E. Nyman coll.).

One Konstantinhafen (Kubary coll.).

One German New Guinea (Cotton and Webster).

One Nicura, British New Guinea (Lix coll.).

Two Brown River (E. Weiske coll.).

These are all very large birds with huge beaks, and measure as follows:—

Culmen over the curve from end of feathering to tip.

Two Berau Peninsula, 133, 131 mm. ; wings, 375, 400 mm.

One Dorey, 110 mm. ; wing, 350 mm.

One ♂ Takar, 144 mm. ; wing, 400 mm.

One Stephansort (? ♂), 148 mm. ; wing, 395 mm.

One Konstantinhafen, 109 mm. ; wing, 370 ? (moulting).

One German New Guinea, 105 mm. ; wing, 360 mm.

One Nicura, 136 mm. ; wing, 400 mm.

Two Brown River, 122, 113 mm. ; wings, 395, 385 mm.

Culmen, 105 to 144 mm. ; wing, 359 to 400 mm. *Males* are evidently larger than *females*.

At Kapaur and Onin the black cockatoo is sacred, and it means, according to Doherty, certain death to kill one. The bird is frequent and very tame at Kapaur.

50. *Microglossus aterrimus alecto* (Less.).

Individuals from the Western Papuan Islands and from the Aru group are so much smaller than those from New Guinea, that they must be recognised as a subspecies.

♂ Salwatty (Doherty), culmen, 91 mm. ; wing, 340 mm.

♀ Mysol (Kühn), culmen, 95 mm. ; wing, 341 mm.

- ♀ Vokan, Aru Islands (Beccari), culmen, 85 mm. ; wing, 310 mm.
 ♀ Vokan, Aru Islands (Kühn), 83 mm. ; wing in moult.
 ♂ Vokan, Aru Islands (Beccari), culmen, 95 mm. ; wing, 325 mm.
 ♀ Vokan, Aru Islands (Kühn), culmen, 86 mm. ; wing moulting.
 One Wanoembai (Webster), culmen, 95 mm. ; wing, 334 mm.
 ♀ Trangan (Kühn), culmen, 85 mm. ; wing, 315 mm.
 One no locality, but evidently Western Papuan Islands (Bruijn), culmen, 86 mm. ; wing, 320 mm.
 One no locality, but evidently Western Papuan Islands (Bruijn), culmen, 85 mm. ; wing, 350 mm.
 Culmen, 85—95 mm. ; wing, 310—350 mm. *Males* are evidently larger than *females*.

The fact that both Arn and the Western Papuan Islands have a smaller race in common is an interesting parallel to the distribution of *Cacatua triton triton* and *Cacatua triton macrolopha*. Kühn describes the iris as coffee-brown, bare skin of face carmine-red, bill and feet black.

51. *Cacatua triton triton* (Temm.).

The only white Cockatoo we know from New Guinea proper is the typical *triton*. We have received the following specimens :—

♂ ♀ Ron, July 1897 (the labels are perhaps by mistake interchanged, as the bird labelled ♀ is larger than the supposed ♂).

♀ ad. Kapaur (Doherty).

♂ ad. Takar (Doherty). "Iris dark brown, feet black, eyelids bluish white."

One Hatam (Bruijn's hunters).

One Dorey (Bruijn's hunters).

Two Ansus, Jobi (Doherty). ♂ iris "bright crimson" (sic!), ♀ "rich chestnut" (!) ; bill and feet "blackish."

One Stephansort, ♀ 13.12.1899 (Nyman). A very large bird.

One German New Guinea (Cotton & Webster).

One ♂ Konstantinshafen (Kubary coll.).

One Aroa River, British New Guinea (Weiske coll.).

Three Goram-lant (Kühn coll.).

Two Ceram-lant (Kühn coll.).

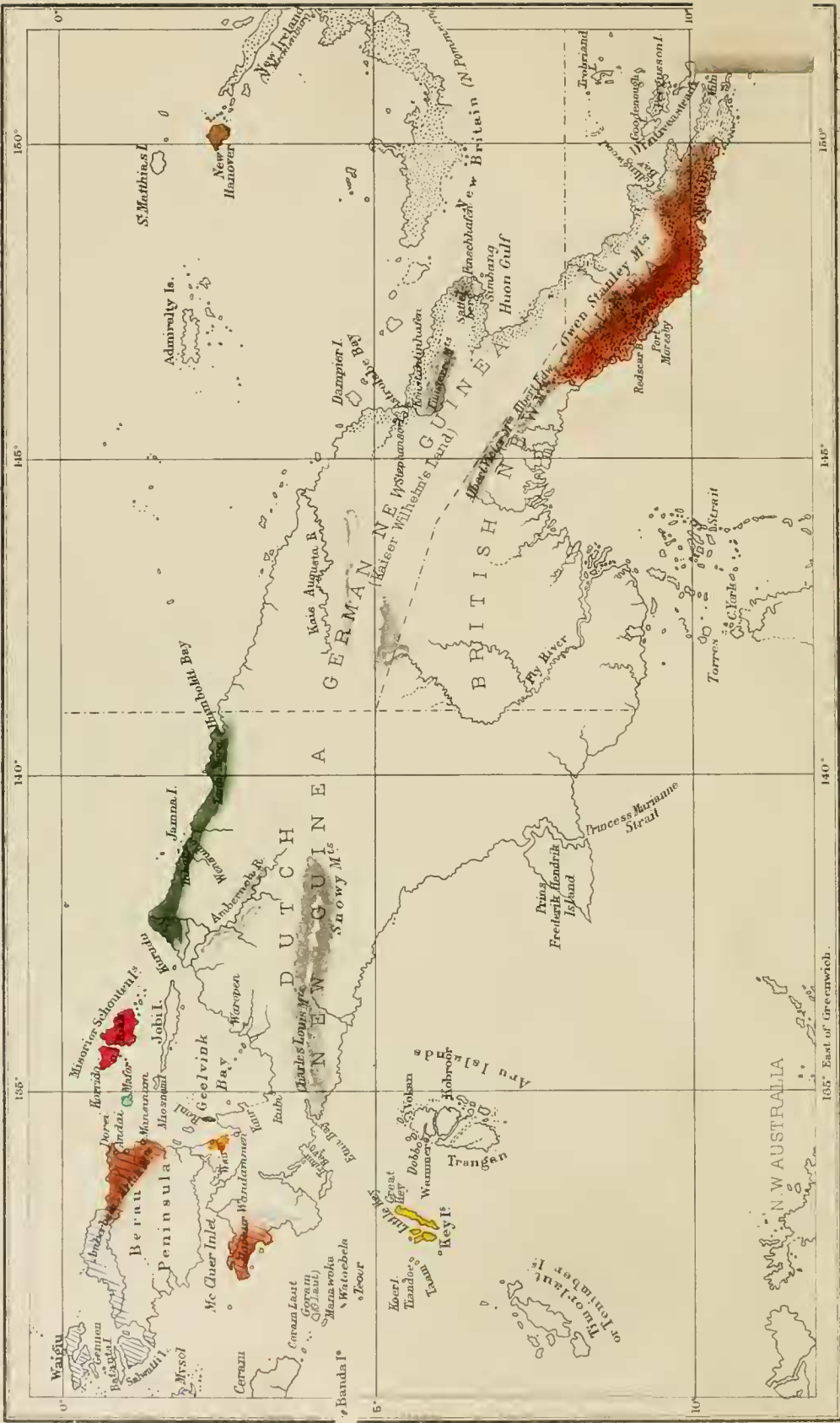
All these birds agree in being very large, with powerful beaks and long wings. It is most peculiar to find typical *triton* on the South-East Islands.

C. galerita of Anstralia differs at first sight from *triton* by the more pointed, strongly laterally incurved and more recurved feathers of the crest. This is a much better character to distinguish dried skins by, than the colour of the naked skin round the eyes, which vanishes when the bird dries.

52. *Cacatua triton macrolopha* (Rosenb.).

Four adult birds from Mysol (3 Kühn, 1 Guillemard coll.), and three from Aru (Dobbo and Kobroor, Kühn coll.), agree with each other and differ from typical *triton*, in being smaller, the wings being at least an inch shorter, the bills less powerful. Kühn has marked the iris of four specimens as dark brown, that of two as red.

This form, which inhabits also Salwatty and Waigin, must certainly be recognised, although Count Salvadori and other authorities have denied its validity.



N. beccarii.
 N. viridifrons.
 N. savadorni.
 N. keensis.
 N. pusio.
 N. gedwukiana.
 N. misorientalis.
 N. pygmaea.

DISTRIBUTION OF THE GENUS NASITERPA.

Standards by Camb. Lond.

185° East of Greenwich.

53. *Cacatua triton trobriandi* Finsch.

Although this form is somewhat larger than *C. t. macrolopha*, it is so much smaller than typical *triton* that it must rank as a well defined subspecies, being moreover confined to the island south-east of New Guinea. See Nov. Zool. III. p. 246, V. p. 531. We have now before us fifteen specimens from Fergusson, Trobriand, Woodlark, Sudest, Rossel, and St. Aignan Islands.

THE GENUS NASITERNA.

Eleven forms of this genus have hitherto been recognised, a twelfth has been described by De Vis, the validity of which we cannot confirm, and a new one is before us, which will be described hereafter. The actual relation of these forms to each other is perhaps not very easy to understand. *N. bruijni* and *N. pygmaea* live in the same places and are doubtless totally different species. *N. maforensis* and *N. misoriensis* are evidently subspecifically allied, and separable specifically from all other forms. It would be quite hazardous to connect them with either *N. bruijni* or *N. pygmaea*. *N. pusio*, *N. salvadorii* (our new form) and *N. beccarii* seem to be geographical representatives of one species. *N. viridifrons* seems to stand alone in some respects, though it may be a representative of *N. maforensis*. *N. keiensis* seems to be representing *N. pygmaea*. The Solomon Islands forms are not yet well represented in the Tring Museum, and we cannot therefore venture to have even an idea about their affinities, though *N. nanina* seems to be very much like the female of *N. finschi*.

54. *Nasiterna bruijni* Salvad.

We have both sexes from Arfak (Bruijn's hunters), Kapaur (Doherty), Mt. Owen Stanley, 5000—7000 feet (collector unknown), Eafa district, British New Guinea (collector unknown)—altogether five specimens from Dutch and five from British New Guinea. The latter are perhaps subspecifically separable, their outer rectrices having apparently more often bright orange tips, instead of pale yellow ones. If this or any other character should be found constant enough, the form from British New Guinea would probably have to be called *Nasiterna bruijni orientalis*. It was described as *Nasiterna orientalis* n. s. by De Vis in the Appendix to the Report on New Guinea for 1896 and 1897 (p. 81). At least we believe that with his creating this *N. orientalis* he meant to separate the British New Guinea form from the typical one from the Berau Peninsula. His description, however, does not, if we understand it right, state any real constant distinguishing characters between the two supposed forms.

55. *Nasiterna pygmaea* (Quoy et Gaim.).

We have before us six specimens without exact localities, but mostly from Bruijn's hunters.

One Andai, purchased from a dealer.

One Dorey (W. Doherty).

Two Mysol (Powell coll., H. Kühn coll.).

Three Kapaur (W. Doherty coll.).

This species is only known from the Berau Peninsula to Kapaur, and from the Western Papuan Islands, namely Mysol, Salwatty, Waigiu, Guebch, and Koffiao.

56. *Nasiterna viridifrons* Rothsch. & Hart.

♂ ad. Forehead green, crown dark blue. Sides of head greenish blue or bluish green. Quills blackish, outer webs with green, inner webs towards the base with yellowish edges. Rectrices with very (4 mm.) long bare tips of shafts ("spines"). Middle rectrices blue, the remainder of them black with bluish green outer edges, the three lateral ones with wide dark yellow tips to the outer webs. Underside yellowish green, middle of abdomen orange-red, sides of belly and the under tail-coverts bright yellow. Wing 66 or 67 mm.

♀ Without the orange-red patch to the middle of the abdomen.

One pair from spirits from New Hanover (Webster coll.).

57. *Nasiterna finschi* Rams. and *N. nanina* Tristr.

Both inhabitants of various islands of the Solomon group, and both as yet unrepresented in the Tring Museum.

58. *Nasiterna keiensis* Salvad.

Eleven specimens in the Tring Museum from the Key Islands.

Nasiterna aolae Grant.

We have one of the co-types, a *male* collected by Mr. Woodford on Gnadalcana 5.6.1887. The iris is marked as "orange." Another specimen, shot on Tulagi, 1.8.1898, not sexed, but marked a "junior," appears to be a young *male* of *N. aolae*, though adult birds may show some differences from typical *N. aolae*.

59. *Nasiterna geelwinkiana* Schleg.

Schlegel described (*Ned. Tijdschr. Dierk.* IV. p. 7, 1871) the *Nasiternae* from Mafor and Misori together under the name of *geelwinkiana*. He only stated the differences between the specimens from Mafor and Misori, but he did not separate them from each other. Count Salvadori renamed both forms under the names of *misoriensis* and *maforensis*, because Schlegel's name referred to two separate forms. We, however, do not approve of this system, but follow the usual custom in such cases, namely, restricting the first name to one of the two forms to which it was given. The first locality being Mafor, we restrict the name of *geelwinkiana* to the Mafor bird, accepting, of course, *misoriensis* for the Misori form.

We have a series of fourteen, unfortunately all very bad skins (Doherty coll.), from Mafor. Several have a yellow patch behind the blue crown.

60. *Nasiterna misoriensis* Salvad.

Known from Schouten Islands (Biak and Korido = Misori) only. Doherty failed to obtain specimens, and so it still remains unrepresented in the Tring Museum. It is said to differ from the former by the absence of blue on the crown, which is brown, and has the yellow patch on the hinder parts of the crown well developed—but this is also found in *geelwinkiana*.

61. *Nasiterna pusio* Schl.

Duke of York Islands, New Britain, New Ireland, St. Aignan and Sudest Islands, Fergusson, South-East New Guinea, Milne Bay, German New Guinea to Konstantinhafen.

We have specimens from all these localities—altogether 25. The sides of the head are ochraceous. One from the Kotoi District (Anthony coll.) has the sides of the head very bright orange, the blue of the crown less extended laterally than usual, the underside more yellowish and with an orange tinge on the middle of the abdomen. This specimen is, however, very closely approached by others, and we are not, at present, able to make any subdivisions of *N. pusio*.

(The original locality "Solomon Islands" was erroneous!)

62. *Nasiterna beccarii* Salvad.

Differs from *N. pusio* in its much deeper brown cheeks and sides of the head and a deeper blue crown.

Only two specimens are known from the western coast of Geelvink Bay between Dorey and Wandammen. One is in Genoa, the other in Milan.

63. *Nasiterna salvadorii* forma nov.

Differs from *N. pusio* in the sides of the crown being dull yellow instead of ochraceous. The blue on the crown is less bright and more greenish blue, the size smaller than that of *N. pusio*.

Wing : 58—63 mm.

We have a pair from Takar (the *female* has the crown duller, sides of crown more greenish), October 1896 (W. Doherty coll.). "Iris dark brown, feet bluish grey, bill bluish grey with darker tip."

One "♀" (?) from the north coast between 136° and 137° long. (Bruijn's hunters), four from near Humboldt Bay (Dumas coll.), two from the lower Ambernoh River (Dumas coll.).

Type : Ambernoh River.

Named in honour of our friend Conte Tommaso Salvadori, whose merits on Papuan ornithology will always remain unrivalled.

Both *N. salvadorii* and *N. beccarii* are probably subspecific forms of *N. pusio*.

64. *Dasyptilus pesqueti* (Less.).

This remarkable Parrot is apparently not uncommon all over New Guinea. We have 21 examples from Dorey, Waropen and Wensudu, east of Geelvink Bay, Konstantinhafen and various places in British New Guinea—Mailu district, and Mt. Cameron to 6000 ft. high.

65. *Eclectus pectoralis pectoralis* (P. L. S. Müll.).

This is the form of *Eclectus* inhabiting New Guinea. It is apparently found all over the island, and also on the islands of Waigiu, Gebeh, Batanta, Salwatty, Mysol, the islands in Geelvink Bay, the Key Islands, and the islands stretching along from Key to Goram-lant; also on New Ireland, New Hanover, New Britain,

Fergusson and Sudest. Between specimens from all these localities we cannot distinguish, though there is a certain amount of variation. The most striking variation is shown in the colour of the abdomen of the *females*, which is sometimes purplish violet (somewhat like that of the *females* of *E. roratus*), while generally bright blue. One *female* from Biak (Doherty) is quite small, and has the under wing-coverts spotted with red. We believe it to be immature. Unfortunately we have no series from Biak.

We have before 29 *males* and 30 *females* from the following places:—Mysol (H. Kühn), Dorey, Kapaur, Takar (Doherty), Mefor and Johi (Beccari, Doherty), Biak (1 ♀ Doherty), Ron (Doherty), Stephansort, Simbang, Sattelberg (E. Nyman), New Britain (Kubary), New Ireland, Fergusson (A. S. Meek), Trobriand (Meek), Sudest (Meek), Nicura (Lix), Brown River (Weiske), Little Key (Kühn), Goram-lant (Kühn), Koer (Kühn).

66. *Eclectus pectoralis aruensis* Gray.

Hartert has already (Nov. Zool. 1896, p. 535) shown that the Aru *Eclectus* has been united erroneously with typical *pectoralis*. We have before us 8 *males* and 3 *females* from Koproor, Wokan, Dobbo and Giabu-Lengan (Beccari, Guillemard, Webster, Kühn), and they show the following differences: They are larger; the wing from 1 to 3 cm longer. The yellow tips to the tails are wider, and sometimes tinged with red in the *male*. The width of the yellow tips is very conspicuous in freshly moulted specimens, but naturally not in much abraded individuals. The tail of the *female* is brighter red, and less blackish towards the base.

67. *Eclectus pectoralis solomonensis* subsp. nov.

We have 2 ♂♂ from Fauro, Shortland group, 20.11.1893 (Wahnes and Ribbe coll.), 1 ♂ Guadalcanar, 1.6.1887 (Woodford coll.), 1 ♂ Rubiana (Cotton and Webster coll.), 1 ♀ Guadalcanar, 1.6.1886 (Woodford), 1 ♀ Rubiana (Cotton and Webster). All these agree in being smaller than our 59 specimens of *E. pectoralis pectoralis*. The bills are less bulky and less long, the wings 1 to 3 cm. shorter. The largest Solomon Islands specimen is still smaller than the smallest of *E. pectoralis pectoralis*.

Type of E. pectoralis solomonensis: ♂ Fauro, 20.11.1893.

THE GENUS GEOFFROYUS.

A study of a material of 230 specimens in the Tring Museum has convinced us that it is far more natural to accept only four species of the genus *Geoffroyus*, with 15 subspecies of one of these species, instead of recognising 15 species, as has been done in the *Catalogue of Birds*.

Geoffroyus personatus is the name to be used for the widespread species with its great number of forms, that name being established as long ago as 1811.

At present we can recognise the following 19 forms:—

68. *Geoffroyus personatus personatus* (Shaw).

One of the smallest forms. Bill rather small. Wing about 150—153 mm. The plum-blue of the crown very pale, reaching only about 15 mm. beyond the eyes,

and not extending to the hind-neck. The general colour is light yellowish green, a large red-brown and golden brown patch on the lesser upper wing-coverts near the shoulder, under wing-coverts of a very light blue. Crown of *female* greenish brown.

Timor, Semaó, and said to be found in Wetter, but we have not examined examples from the latter island. Six in Tring Museum.

69. *Geoffroyus personatus floresianus* Salvad.

Differs from *G. p. personatus* as follows: Slightly larger, with a larger bill; wing 158—163 mm. The plum-blue of the crown deeper and extending farther down. General colour much darker green, the brown shoulder-patch also darker, under wing-coverts deeper blue. Crown of *female* darker brown.

Flores 8 examined.

70. *Geoffroyus personatus sumbavensis* Salvad.

Of the size of *G. p. floresianus*, or even larger; wing 161—172 mm., the green general colour a little lighter than in *floresianus*, sometimes nearly as light as in *G. p. personatus*; under wing-coverts lighter than in *floresianus*, but slightly deeper blue than in *G. p. personatus*. Extent of plum-blue as in *floresianus*.

We have not the slightest doubt that *landsbergii* of Finsch is only an aberration of *sumbavensis*!

Sumbawa and Lombok, 28 before us.

(This is the most western home of a *Geoffroyus*.)

71. *Geoffroyus personatus tjindanae* Meyer.

Quite like *sumbavensis*, but slightly larger. Wing about 170—177 mm. Under wing-coverts perhaps a shade lighter.

Sumba or Sandalwood Island, 11 specimens.

72. *Geoffroyus personatus rhodops* (Schleg.).

Very large. Green colour rather dark. Under wing-coverts and axillaries deep blue. Shoulder-patch rather dark brownish red. Red of the face of the *male* sharply separated from the blue crown, while in the forms *a, b, c, d* the ear-coverts and region behind the eye is more or less washed with lilac. Crown of adult *female* very dark chestnut-brown. Under-mandible of *males* from Ceram-lant blackish (marked "black" on three labels by Mr. Kühn). (In *males* from Ceram and Amboina the mandible is not always black.)

Wing of *male* about 189—195 mm.

Southern Moluccas: Buru, Amboina, Ceram, Ceram-laut, 16 specimens.

73. *Geoffroyus personatus explorator* Hart.

Differs only from *rhodops* in the following points: It is smaller, wing of *male* only 175—178 mm. The under mandible of the *male* is apparently always pale (marked dirty white, yellowish white, pale brown on four labels by Mr. Kühn). The crown of the *female* is apparently much lighter.

Goram and Manawoko Islands, between Ceram and Key, 6 specimens.

74. *Geoffroyus personatus capistratus* (Gray).

(This is the form generally called *keyensis*.) Plum-blue crown-feathers red towards the bases. Very large, very yellowish green, especially the tail very yellowish; the middle rectrices greenish golden yellow with bright light-green margins. Ear-coverts with a lilac wash. Under wing-coverts light blue.

Wing of *males* about 188—192 mm.

Head of *female* rather pale.

Only known from the Key Islands, whence we have 13 skins.

75. *Geoffroyus personatus timorlaoensis* Meyer.

Differs from *capistratus* in being smaller. Wing of adult *male* (marked "Typus" by the author) in Tring Museum 183 mm.

Tenimber or Timor-laut Islands.

76. *Geoffroyus personatus aruensis* (Gray).

Smaller, and of a darker green than *capistratus* and *timorlaoensis*, blue crown-feathers greyish (not red!) towards the bases.

Wing of *males* about 163—168 mm.

Aru Islands, South-Eastern New Guinea, and Fergusson Island in the D'Entrecasteaux group. We are not able to separate specimens from Arn, British New Guinea (Brown River, collected by Emil Weiske; Milne Bay, collected by A. S. Meek) and Fergusson Island. We have now 29 skins.

77. (?) *Geoffroyus personatus orientalis* Meyer.

We are somewhat in doubt if this supposed subspecies can be satisfactorily separated. It seems to us that it is like *aruensis* in both sexes, except that the blue of the under wing-coverts is generally a shade lighter, the red of the face a shade lighter, and the wing often 2 or 3 mm. shorter.

In the original description the *male* has been compared with the widely different *rhodops*, and the *female* originally described was probably not quite adult, though perhaps the crown does not become so deep chocolate-brown as in typical *aruensis*.

Geoffroyus personatus orientalis inhabits the coasts round Huon Gulf in Kaiser Wilhelm's Land. We have five skins, collected at Simbang and on the Sattelberg by the late Dr. Erik Nyman.

78. *Geoffroyus personatus sudestiensis* Vis.

Closely allied to *aruensis*, but differing in the total absence of a reddish brown spot near the shoulders.

This form is only known from Sndest and St. Aignan Islands, in the Louisiade group. (Cf. Nov. Zool. 1898, p. 551.)

79. *Geoffroyus personatus cyanicarpus* Hart.

Agrees with *sudestiensis* in the total absence of the reddish brown spot on the wings, but differs as follows; The whole edge of the wing, from the bend to the beginning of the outmost primary blue like the under wing-coverts, instead of